TECHNICAL EXHIBIT 13

Drydocking Availability for YC 1639 (FY18)		
Number	**Scope of Work (SOW), For On Island Work Effort**	
	a) Location of Work:	
	1) Wharf "W" GTMO	
	b) Identification:	
	1) YC-1639	
	c) Reference:	
	1) NAVSEA DRAWING # 6185365 YC Docking Plan	
	2) 70001248, Hull Structural Arrg't & Detail	
	3) 70001249, Midbody Deck and Bottom	
	4) 7000250, Aft Rake	
	5) 70001251, Forward Rake	
	6) 70001252, Midbody Side Sheets	
	7) 70001253, Transverse Bulkheads	
	8) 70001258, Bumper Details	
	9) 7010380, Deck Plating	
	10) 7010384, Deck Arrangement and Details	
	11) 70001260, Anode Location and Docking Plan	
	12) NSTM CH-997, Docking Instructions and Routing work in Drydock	
YC 1639-01	**Safety/Q/C Requirements.**	
01.1	Establish safety work plan for dry-docking/undocking and repair of the craft	
01.2	Ensure all PPE requirements are in good working condition and always available on site.	
01.3	Maintain gas free for entry until completion of repairs in confined spaces.	
01.4	All safety sign boards must be visible on travel lift area or job site.	
01.5	Hard hat is mandatory and no exemption.	
01.6	Gauges (manometer) for void tank air test must calibrated and tested several times prior to start the job. Observe closely air pressure 2 PSI MAX.	
01.7	Paint coating shall be free of runs or sags with all borderlines, struck clean, clear and precise.	
01.8	Apply paint only under weather conditions and coating intervals as recommended by the paint manufacturer.	
01.9	Extend paint coating curing time as required by weather condition.	
01.10	Minimum DFT (Dry Film Thickness) shall be listed on QPL-24647	
01.11	Metal exterior surfaces of the craft shall be coated in accordance with the requirements in NAVSEA S9086-VD-STM-030/CH-631V3R2 Table 631-8-10 (Paint System for Exterior Steel Surfaces on Surface Ships)	
01.12	Provide temporary lighting and ventilation in to all tanks as needed to maintain gas free certificate. Ensure lighting fixtures are explosion proof.	
01.13	All corners, edges and underneath (stiffeners, gazettes and coaming) that cannot be reached by sandblasting sand shall be cleaned by means of appropriate portable decaling equipment, chipping hammer and wire brush to ensure metal surfaces are rust free prior to prime coat.	
01.14	All corners, edges underneath (stiffeners, gazettes and coaming) that cannot reached by spray paint shall be stripe coated manually with brush to ensure metal surfaces are properly preserved.	
01.15	Zinc anode surfaces and fasteners shall not be preserved or painted.	
YC1639-02	**Docking and Undocking**	
02.1	Use of a dockmaster and trained docking crew using ref. c. 1 and 12. provide, set, and align the blocks. Blocking shall be positioned to ensure that equipment on the surface of, or protruding from the hull will not be damaged and shall be accessible for removal and repairs. Provide at least the minimum clearances between the craft's hull and drydock necessary to accomplish dry-dock work within these specifications. Hull openings shall not be obstructed.	
02.2	Take and record tank soundings and determine ballast requirements to dry-dock the craft with list, trim, and stability conditions.	
02.3	Utilize travel lift to lift craft from the water and transport to blocks.	
02.4	Inspect the fit on the blocks immediately after the craft is dry-docked. Provide shimming between blocking and the craft's hull in the event of hull movement due to removal of ballasting or shifting of craft load.	
02.5	Pressure wash the craft's underwater hull and fittings with minimum 2500psig nozzle pressure and hand scrape to ensure the removal of dirt, slime, marine growth, fouling, and other foreign substance.	
02.6	Upon completion of bottom cleaning and painting, shift the craft on the blocks and ensure 100 percent bottom cleaning and painting.	

TECHNICAL EXHIBIT 13

02.7	Accomplish stability and loading calculations based on weight changes made on the craft while in dry-dock. Obtain the tank loading condition upon entering dry-dock, and a list of weight changes during the dry-dock period. Based on the conditions upon docking and weight changes made while in dock. accomplish calculations to determine conditions upon undocking. Determine ballast requirement to maintain list, trim, and stability conditions.	
02.8	After hull is submerged, accomplish a watertight integrity inspection of contractors work affecting water tightness of the hull plating below the water level. Once inspected and found watertight, continue with the undocking.	
YC 1639-03	**Hull Zinc Protector Removal and Reinstallations**	
03.1	Upon satisfactory completion of hull cleaning, break loose frozen bolts and nuts.	
03.2	Remove all hull zinc anodes and inspect existing stud bolts weldment for possible cracks.	
03.3	Replace defective stud bolts as required. Ensure all stud bolts are made of (stainless steel) non-ferrous material	
03.4	Install 56 new zinc anodes conforming to MIL-A-18001.	
YC 1639-04	**Underwater Body and Freeboard; repair**	
04.1	Accomplish a visual inspection of the underwater hull and freeboard for, deterioration, damage, and other defects immediately after dry-docking including locations. Submit one legible copy in electronic media of the report to the COR.	
04.2	Lay-out pattern/guide, grind spots as mark on the craft surfaces preparatory for the UT inspection.	
04.3	Conduct UT on prepared spots, on the entire craft using a 24" grid system and plot readings. Submit one legible copy in electronic media, of a report listing results of thickness reading to the government representative. List in one column the design thickness of plate inspected. List in another column, next to the design thickness , the actual thickness readings taken. List specific locations with respect to frame, strake, or measurements from suitable reference points.	
04.4	Accomplish repair to the underwater hull and freeboard as follows. Remove existing and install new 100 square feet of 15.3 and 50 square feet of 12.75 pound plate to underwater hull and freeboard plating as designated by the government representative.	
04.5	Clad weld 200 square inches of deteriorated pitted underwater hull and freeboard plating and vee out and reweld 50 linear feet of welded butts and seams as designated by the government representative.	
04.6	Surfaces shall be ground smooth to sound metal. Clad weld pits and grooves prior to application of principal build-up layers. Build-up shall be limited to areas reduced by 25 percent, but not greater than 45 percent, of original thickness. Areas greater than 45 percent thickness reduction shall be replaced under 04.4 above.	
04.7	Accomplish nondestructive testing of shell plating radius corners and intersections, weld butts, and seams.	
04.8	Accomplish a water or air hose test of newly repaired weld seams and inserts. Allowable leakage: None.	
YC 1639-05	**Removal and Reinstallations of P/S Rubber Fenders**	
05.1	Provide rigging and forklift services for removal and reinstallations of rubber fenders.	
	Accomplish a visual inspection of rubber fenders including fender retainer brackets around periphery of craft for defects and deterioration. Submit on legible copy via electronic media to the government representative.	
05.2	Remove existing rubber fendering (upper and lower) and retain for reuse. Upon completion of preservation operations, install retained fendering found suitable for reuse. Secure rubber fenders in a safe place until ready to install. Mark sections of rubber prior to removal for reinstallation.	
05.3	Install P/S fenders in to original configuration design. Ensures all securing bolts are CRES (ASTM F593 for bolts and ASTM F694 for nuts), class 304 or 316 in lieu of galvanized steel.	
YC 1639-06	**Removal/Recondition and/Reinstallations of Life Line and Stanchion Post**	
06.1	Remove life line from main deck and shift to rigging shop for recondition.	
06.2	Free up all turn buckles attached from the wire rope.	
06.3	Inspect wire ropes for broken strands. Replace up to 100ft of stainless wire rope as required.	
06.4	Replace plastic covering of wire ropes as required.	
06.5	Inspect stanchions and gussets. Replace a total of 12 stantions and gussets	
06.6	Reinstall life line upon completion of main deck preservation, adjust turnbuckles.	
YC 1639-07	**Mooring and Towing Fittings and Spud Housings**	
07.1	Accomplish a visual inspection of each deck fitting after cleaning all welds.	
07.2	Record visual inspection for structural defects, worn or grooved areas, cracks, dents, and broken or defective welds. Submit on legible copy via electronic media to the government representative.	
07.3	Vee-out and weld one linear foot of defective welds as designated by the government representative.	
07.4	Replace 25 ea. 3/8 x 4" stainless toggle pins stanchion posts that require replacement.	
07.5	Inspect and repair/repaint 2 ea. Spud housings	
07.6	Lubricate spud sleeve housing with water resistant grease prior to installation.	
YC 1639-08	**Void Inspection and Repair**	
08.1	Open/remove manhole cover on each void tank prior to gas free test. Total of 6 voids, 11 manhole covers and one DC hatch. Fabricate new gaskets for void manhole covers and ensure all fasteners are CRES 304 or 316.	
08.2	Empty, clean, certify, render dry, and maintain "Safe for Workers and Safe for Hot Work" each void.	

TECHNICAL EXHIBIT 13

08.3	Accomplish a visual inspection of voids for existing preservation coating, structural damage, and deterioration, including structural members, manhole covers, and coaming for manhole covers. Submit a legible copy via electronic media to the government representative.	
08.4	Accomplish approximately 20sqft of spot preservation per void.	
08.5	Accomplish a visual inspection of each void for cleanliness and completion of work prior to installation of manhole covers.	
08.6	After all void work has been accomplished, perform an air test of each void. Test pressure shall be 2 PSIG MAX using a calibrated gauge. Maintain test pressure for 15 minutes for temperature stabilization prior to start of test. Hold test pressure for 10 minutes. Allowable drop in pressure: None.	
08.7	Hydro static test P/S pipe fenders for possible leak and apply internal preservative oil upon completion of repair.	
08.8	Disassemble the watertight hatch and retain parts for reassembly. Accomplish a visual inspection of hatch, dog assemblies, operating mechanisms, gasket retainer channel, knife edge, hinge assembly, fittings, and hatch frame for wear and defects. Submit one legible copy via electronic media to the government representative.	
08.9	Clean internal and external parts exposed by removals and disassembly free of oil, grease, dirt, loose paint, and rust. Remove existing gasket from gasket retainer channel. Straighten and repair hatch and dogging assemblies.	
08.10	Straighten hatch to obtain optimum flatness. Warpage tolerance shall not exceed 1/8 inch out of true plane in any direction.	
08.11	Install new dogs, including hinge pins, washers and fasteners in way of damaged or defective. Install new rubber silicone gasket conforming to ZZ-R-765, Grade 30, Class 2b.	
08.12	Assemble hatch, reinstall hatch and adjust dogs, hinges, spring balance and operating mechanisms for positive dogging action. Lubricate exposed working parts, using general purpose grease conforming to MIL-DTL-23549.	
08.13	Accomplish an operational test of hatch. Open and close hatch through four complete cycles. Allowable sticking or binding: None. Accomplish a chalk test on the hatch. Chalk imprint shall be centered with 100 percent contact..	
YC 1639-09	**Painting Requirements and Procedures**	
09.1	Sandblasted metal shall not be exposed from weather for more than six (6) hours prior to prime paint application of Epoxy Formula 150.	
09.2	Cleaning should be thorough prior to primer and top coat application.	
09.3	Curing time of primer paint (Epoxy Formula 150 & 151 shall not be more than 24 hours weather exposures.	
09.4	Sandblasted metal shall not be exposed from weather for more than six (6) hours prior to prime paint application of Epoxy Formula 150.	
09.5	Painting or preservation efforts shall be applied in any area where dust/dirt can be introduced into the efforts.	
09.6	Cleaning should be thorough prior to primer and top coat application.	
09.7	Re-fleet craft on the blocks in order to ensure areas covered by docking blocks receive preservation and paint coverage.	
09.8	Cleaning should be thorough prior to primer and top coat application.	
09.9	Re-fleet craft on the blocks in order to ensure areas covered by docking blocks receive preservation and paint coverage.	
YC 1639-10	**Sandblasting and Painting Efforts**	
	a) Location of Work: 1) Dry dock Facility b) Identification: 1) Not Applicable c) References: 1) NAVSEA S9086-VD-STM-030/CH-631V3R2	
10.1	Provide rigging services for erection of scaffolding on locations as required.	
10.2	Rig and mobilize sand blast equipment misc. parts near YC-1639	
10.3	Deck scalar (heavy duty) shall be utilized in non-skid removal on main deck.	
10.4	Sand blast entire horizontal and vertical surfaces of the craft to near white metal from the keel to the main deck.	
	Underwater Hull, (Keel to Top of Boot top)	
10.5	Primer: One anti corrosion coat MIL-PRF-24647, Type II, Red and One coat MIL-PRF-24647, Type II, Gray, 5-7 MILS/Coat.	
10.6	Top Coat from keel to bottom of boot top: One anti-fouling coat MIL-PRF-24647, Type II, Red and One anti-fouling coat MIL-PRF-24647, Type II, Black. 5-7 MILS/Coat. Top coat for boot top will be same anti-fouling except two coats of black.	
	Exterior Surfaces (Above Boot top with Exception of Areas Receiving Nonskid)	
10.7	Primer: One coat MIL-PRF-23236, Type V or VI, Class 5 or 7. 4-8 MILS.	
10.8	One stripe coat and One full coat MIL-PRF-23236, Type V or VI, Class 5 or 7. 4-8 MILS/Coat	
10.9	Top Coat horizontal surfaces, decks: One coat deck gray no. 26008 (FED STD 595), MIL-PRF-24635 Type III, Grade B,. 2-3 MILS	

TECHNICAL EXHIBIT 13

10.10	Top Coat vertical surfaces: One coat haze gray no. 26270 (FED STD 595), MIL-PRF-24635, Type III, Grade B. 2-3 MILS. Or MIL-PRF-24763, Type II or III, class 2, Grade B. 2-4 MILS.	
	Non-Skid Areas of Deck	
10.11	Primer: One coat proprietary non-skid primer listed on the qualified products list (QPL) for MIL-PRF-24667 of type to match non-skid that will be applied.	
10.12	One stripe coat of proprietary non-skid primer listed on the QPL for MIL-PRF-24667	
10.13	Non-Skid: One coat of dark gray, MIL-PRF-24667, Type I, V, VI or VIII, Comp G or One coat dark gray, MIL-PRF-24667, Type II, III, IV, Comp G.	
YC 1639-11	**Removal/Disposal of Used Sandblasting Sand**	
11.1	Sweep/wipe clean manually blasted area upon completion of sandblasting operation.	
11.2	Provide rigging and forklift services for disposal of used sandblasting sand from travel lift area to dumping site.	
YC 1639-12	**Securing of Equipment and Excess Material Upon Satisfactory Completion of Work.**	
12.1	Provide rigging/forklift services for securing equipment from job site to the shop.	
12.2	Segregate serviceable material and turnover accordingly to Port Services supply warehouse.	
12.3	Remove/dispose all unserviceable material from travel lift area to dumping site.	
12.4	Provide vacuum equipment services for final clean up of sandblasting sand from the ground.	
YC 1639-13	**Completion of Docking Reports**	
13.1	Contractor to complete docking report and all inspection/repair/NDT reports and submit to the government representative.	